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Energy Management

Installation & User Guide

SM1020 GP Gateway
SM1020/W GP Gateway

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1. Introduction

1.1 The SM1020 GP Gateway Range

The RCS GP gateway has been designed as a cost effective solution to allow Bi-directional RS485 communications with RCS control products to and from IP based monitoring bureaus and other 3rd party systems.

The SM1020/**W** version provides Bi-directional ModBus communications with Williams Refrigeration Ltd, control products to and from IP based monitoring bureaus and other 3rd party systems.

The GP Gateway/s provide the ability to:-

- Change controller operating parameters - enabling full parameter management.
- Communicate with 32 RS485 Devices.
- View real time controller status information.

The SM1020/W version supports the following Williams / LAE controller types:-

- AD2-5
- AD3-5
- WUMC2
- WUMC3
- WUBC2
- WUBC3

1.2 Configuration

The GP Gateway is simply configured by connecting a CAT5 patch cable between the Ethernet port of the gateway and a laptop / PC with a static IP address in the range of 192.168.0.xxx.

Once the laptop / PC is configured, a web browser session can be started and the user can navigate to the default IP address of the GP Gateway which is 192.168.0.101.

The web page that will be displayed allows the user to fully configure all IP settings and specify which controllers are to be connected via RS485 to the device.

Once this has been completed the GP Gateway is ready to be installed.

1.3 LED Status Information

Power LED (Green) – This indicator will be illuminated constantly when the 5vdc power supply is present.

RS485 Status LED (Red) – This indicator will initially be off, until valid communication activity is detected. Once RS485 communication activity is present the LED will flash at an intermittent rate.

System status LED (Bi-Colour) – This indicator during normal operation will flash a mix of green and amber. If the indicator displays permanent flashing green, RS485 communications has stopped.

2 Setting up the Gateway

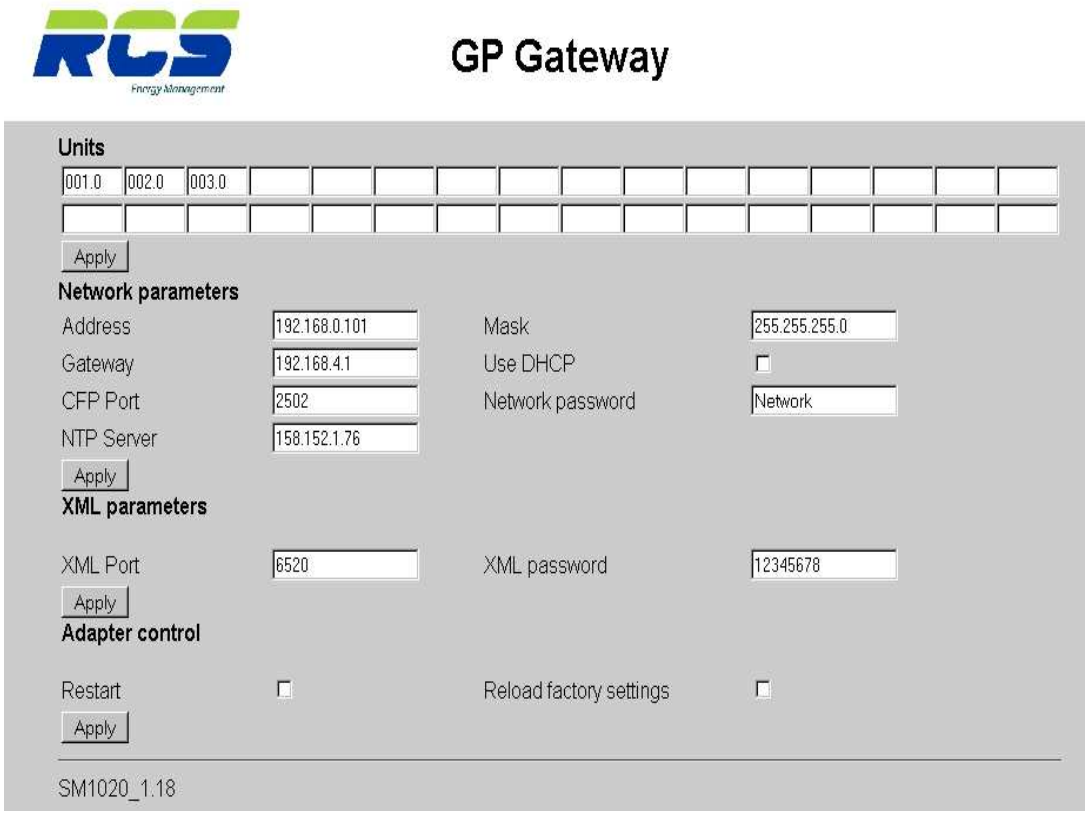
2.1 User Instructions

The GP Gateway has a default IP address of 192.168.0.101. The user can ensure that this address is loaded by pressing the setup button on the side of the GP Gateway on power up for 5 seconds.

Please follow the procedure listed below to be presented with the GP Gateway configuration page. (fig. 1)

1. Connect a CAT5 patch lead into the Ethernet port of the GP Gateway.
2. Connect the CAT5 patch lead into the Ethernet port of the laptop / PC which will be used to configure the GP Gateway.
3. Ensure that the laptop / PC is assigned a static IP address within the range of 192.168.0.*xxx* .
   NOTE - care should be taken to ensure that this IP address doesn't clash with any existing devices resident on the network.
4. Power the GP Gateway off and on whilst holding the setup button in.
5. A standard web browser session can now be started on the laptop / PC. Type the default IP address of 192.168.0.101 into the browser address bar to display the GP Gateway setup screen (fig. 1)

2.2 Fig 1 - Screen Shot of the Configuration Page



3 Configuration

3.1 Units

The 32 boxes under the heading of “units” allow the user to configure each of the controller unit numbers which are to be connected onto the GP Gateway’s RS485 interface. Simply click into each box and type the controller address. Please note the controller address should be entered in exactly the same format that it appears on the controller.

The SM1020/**W** variant also allows the user to enter three characters of text preceding the unit number e.g JSR1.0. - where JSR stands for J.Sainsbury Restaurant. This text will be included within the XML string that is supplied to the monitoring bureau, and can aid in the physical location of a particular device.

Once all unit addresses are entered simply click the “Apply” button to save the configuration. This action will cause the GP Gateway to restart.

3.2 Network Parameters

To assign the GP Gateway a static IP address simply click into the desired field and type the required address. If the “use DHCP” field is checked, the GP Gateway will automatically request an IP address from the network DHCP server. Please note:- If DHCP has been selected and the user subsequently wishes to re-enter the configuration page this can be achieved by following the same steps as defined at the start of this document. Any changes should be followed by clicking the “Apply” button to save the changes. This action will cause the GP Gateway to restart.

3.3 XML Parameters

The values within the “XML Port” and “XML Password” are automatically populated on power up. Care should be taken if the user wishes to change these values from the defaults. Any changes should be followed by clicking the “Apply” button to save the changes. This action will cause the GP Gateway to restart.

3.4 Adaptor Control

If either the “restart” or “Reload Factory Settings” boxes are checked and “Apply” is subsequently clicked these actions will immediately take effect, and the GP Gateway will restart.

4 Specification

Ethernet Interface:	10/100 Base-T.
External Power supply: (Supplied)	
	AC 240v 50/60Hz <0.2A
	DC 5V ± 5% <0.5A
EMC:	EN 55014-1:2006 A2
Weight:	65 Grams (Excluding PSU)
Size:	110mm (L) x 57mm (W) x 26mm (D) – Inclusive of mounting flanges.
Ventilation:	No requirement for forced air cooling.
Operating temperature range:	+5 ˚C to +50 ˚C
Operating Humidity:	80% Maximum
Class 2 Insulation:	No protective earth is required.
Product Origin:	Designed and manufactured in the UK

4.1 Dimensions

4.2 Ordering Information

Part Number	Product Name	Description
SM1020	GP Gateway	General Purpose RS485 to IP Protocol Converter
SM1020/W	GP Gateway for use with Williams refrigeration units	General Purpose ModBus to IP Protocol Converter for Williams / LAE controllers

5 Revision History

Revision	Date	Author	Amendments	Comments
First Draft	02/02/2013	DS	First Draft	Issued for internal review
Issue 1.0	17/06/2013	DS	Agreed content/format	Issued for customer distribution
Issue 1.1	28/06/2013	DS	Image alteration	Issued for customer distribution
Issue 1.2	16/01/2014	SL	Additional information added for Williams variant	Issued for customer distribution

6 Disclaimer

To allow for design and specification improvements, the information contained within this document is subject to change at any time without prior notice. RCS Energy Management shall not be liable for any errors or omissions, for incidental or consequential damages either directly or indirectly resulting from the misuse of this product or associated document.

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